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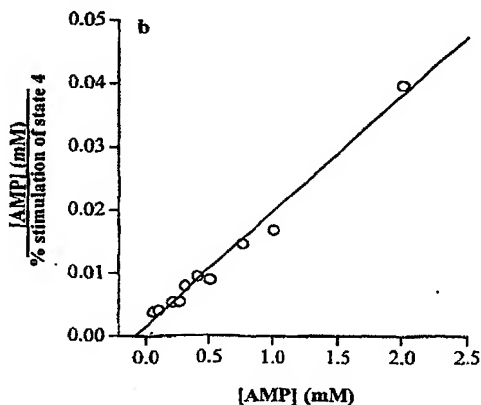
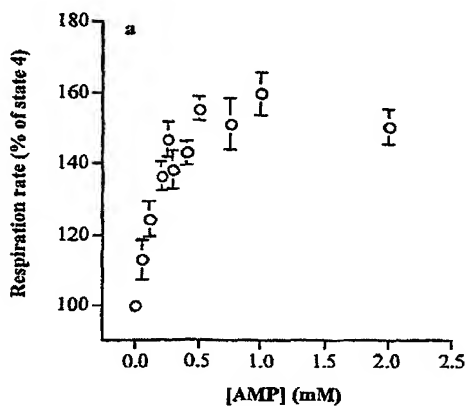
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(54) Title: **SCREENING FOR COMPOUNDS MODULATING MITOCHONDRIAL PROTON LEAK**



(57) Abstract: The present invention provides a screening method for the identification of compounds which modulate an AMP-sensitive regulatory site on mitochondria comprising the steps of: a) contacting a test compound with mitochondria in the presence of a substrate for respiration in the presence of a buffer system; b) measuring an index of metabolic rate; and c) identifying compounds which modulate metabolic rate. Alternatively or additionally membrane potential can be measured. The invention also comprises a regulatory site for a mitochondrial proton leak which is related to the adenine nucleotide carrier, a binding assay and a functional assay.

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